

Coal e-Newsletter

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COAL NEWS

NEW ZEALAND

Ministry of Economic Development backs coal powered power station

A coal fired Marsden B Power Station would give the country's electricity supply added security, according to the Ministry of Economic Development (MED). After receiving 4000-plus submissions to the Northland Regional Council and Whangarei District Council, hearings have begun to decide if the proposed coal fired power station by Mighty River Power at Marsden Point will go ahead. Most submissions raised environmental concerns about air quality, health, visual effects, dust, odour and emissions of potential toxic substances such as sulphur dioxide.

MED recently told an independent commission hearing resource consent applications to re-fire the station with modern modern coal combustion technology that as long as local environmental impacts could be avoided, remedied or mitigated, it supported the plan because it contributed to the national energy objective of enhanced security of supply. MED stated electricity demand in New Zealand was expected to grow at up to 1.8% every year until 2025, and economic growth was not sustainable if it came at the expense of significant long term environmental damage. MED said the commissioners could not consider the effect of the proposal on global warming, as that had been addressed by central government by way of a carbon tax on industries (including Marsden B) that produce greenhouse gas emissions.

Marsden B would generate about 2200 GWh of power a year, about 5% of the country's electricity demand. MED said the power station is situated in an ideal location to improve the security of New Zealand's electricity system. New generation north of Auckland implies reduced pressure on the transmission lines south of Auckland which are nearing capacity and also reduced pressure on the transmission lines running from Auckland to the North Shore. Far North, Whangarei and Kaipara Districts Federated Farmers said the station was important in ensuring the security of electricity supplies to farmers.

The Coal Association's submission stated that this plant will be welcomed as a New Zealand demonstration of clean coal technology that is widely utilised around the world, including countries with high environmental standards. Instead of retrofitting the previous oil boiler, Mighty River Power is proposing to build a new "state of the art" pulverised coal combustor that is purpose designed for the properties of the likely source of coal. Baghouse filtration or electrostatic precipitators will be used for particulate control and flue gas desulphurisation for acidic gases.

Pike River Coal choice down to two ports

Westport is out of the running in the chase to handle exports from the proposed Pike River coal mine. That leaves Greymouth and Lyttelton competing for 1.3 million tonnes of coal a year after the mine starts production next year. Pike River Coal, 79% per cent owned by New Zealand Oil and Gas, is expected to decide soon whether it will ship coal from Greymouth or send it by rail to Lyttelton. The company has the approvals, resource consents and access agreements needed for the mine, 42 km northeast of Greymouth in the Paparoa Range.

NZOG has delayed a decision on a public share offer till the end of September, but is already looking for private equity to develop the project. Some investors did not expect the initial public offer to happen this year because of delays in the project, which had also added \$20M in costs, taking the development costs to \$100M. Part of the cost increase is due to higher steel prices and increased demand for mine construction services.

New Zealand's Minerals Investment Strategy

Crown Minerals has recently published its Minerals Investment Strategy on its website. It states that New Zealand's mineral estate is a significant national asset with the potential to make a large and long term contribution to our economic well-being.

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"For many years, that potential has been recognised, but unrealised". A major factor in this has been a lack of sustained and large scale investment in exploration. Increasing recognition of the need for regionally based economic development, favourable market conditions for many of the commodities found in New Zealand, and improving awareness of prospectivity, have now created the opportunity to materially increase the levels of international and domestic investment in the mineral industry."

Coal and lignite are highlighted as critical inputs in providing strategic energy infrastructure that enables sustainable economic growth. Crown Minerals highlights as strategic priorities: enhancing prospectivity knowledge (including on-line permitting and geotechnical data systems), targeted marketing and communications (on the lack of overseas awareness of exploration and mining opportunities in NZ) and addressing key land availability and access issues (including negative perceptions about RMA and other consent processes). There is an acknowledgement that "Environmental values should and will continue to be recognised through the land access and resource consent processes. However, these can create unnecessary delay, increasing investment risk. There are opportunities for Crown Minerals to properly emphasise issues of economic benefit to bodies making decisions on land access matters."

INTERNATIONAL

Gujarat NRE buys 2nd coal mine (Australia)

Gujarat NRE Coke Ltd., India's largest coke producer, agreed to acquire its second coal mine in Australia for US\$60M to secure coal supplies to feed its coke ovens. The company will buy the closed Avondale Colliery in New South Wales and part of the Huntley colliery from a property developer, Gujarat NRE said in a statement to the Bombay Stock Exchange. The two sites will be rehabilitated and worked as one mine.

The new mine will produce 2Mt of coal a year and reserves at the site will last for 50 years. The combined Avondale-Huntley acquisition is Gujarat NRE's second mine in Australia after it bought the Bellpac1 mine in December. India imported about 16Mt of coking coal in 2004.

New deal aims to boost Hunter coal exports (Australia)

Coal exports from the Hunter Valley are expected to increase by 20% under a new agreement to improve the mining sector's supply chain. Private infrastructure operators and state and federal governments have signed a memorandum of understanding to improve the transport of 80Mt of coal from 30 mines onto ships at the port of Newcastle.

It essentially establishes a central group that does all of the planning - the ships, the port activities, the rail delivery and overall capacity to maximise throughput. About 18 months ago, this process started and coal exports through Newcastle were about 69Mt per annum. This year, about 81Mt will be exported. The Federal Transport Ministry also unveiled a \$100M grant to speed up work on a rail network linking the eastern states.

Maritsa Iztok mines seeks loan (Bulgaria)

The Maritsa Iztok mining company, located in the Maritsa Iztok lignite coal mining basin in Southern Bulgaria, is negotiating a loan with BNP Paribas, DZI Bank and Corporate Bank. The credit will be needed for the implementation of the company's investment programme, purchase of new earth movers and reconstruction of the heavy mining machinery. The Maritsa Iztok mining company plans to produce 22Mt of coal in 2005.

8 working hours limit for coalminers (China)

China will reduce the workload of coal miners by shortening their work hours to 8 per day, while maintaining their current salary. China's Cabinet issued a circular on promoting the healthy development of the coal mine industry, in which it stressed improving the living conditions of coal mine workers.

Under this condition, coal miners will have more time to take care of their families and keep track of the school work of their kids. The shortened work time will not affect the fast profits of the coal mine industry much when coal prices have been climbing due to short supply. It has also been suggested that with more sleep and clearer minds, miners could be more efficient.

China-Australia coal summit launched (China)

China will join both federal and state governments for a joint roundtable about coal during the launching of the Australia-China Coal Summit. It is recognised China will be a key player in future resource and energy developments and its influence will be felt in the international coal market. Australia is recognised as having expertise in mining technology services, coal gas management, education and training and coal mine safety.

CEZ signs long-term contract with MUS on coal supplies (Czech Republic)

Power utility CEZ signed a long-term contract valid for up to 50 years with brown coal mining company Mostecká uhelná společnost (MUS) on coal supplies. CEZ said it wanted to secure supplies of coal for the Pocerady power plant, where one new unit is to be built and three existing units are to be modernised.

Recently, CEZ signed an addendum to its contract with brown coal mine Severoceske doly, securing coal supplies for Ledvice, Tusimice and Prunerov power plants. CEZ operates 13 brown coal fired and one black coal fired power plant, two nuclear power plants, and dozens of hydroelectric power plants. The company also owns one solar and two wind plants. CEZ produced 61.6TWh of electricity last year, almost 75% of the Czech Republic's total output of electricity.

New German coal power plant to capture CO₂ (Germany)

New Swedish technology to capture and store waste CO₂ will be used to build a new German coal fired power plant. Vattenfall, a Swedish company, which owns coal mines and power stations in Germany, plans to start construction next year.

The technology being developed is designed primarily for use with lignite, or brown coal, which is one of eastern Germany's primary mineral resources. The company believes coal has a future and it would also help German profits within the European Union's CO₂ trading system. The trading scheme allows European companies that emit less CO₂ than allowed under set quotas can sell unused allotments, or credits to those who overshoot their allocation.

Lanna to open coal mine (Indonesia)

LANNA Resources Plc (Thailand) plans to build its third coal mine in Indonesia, with an aim of significantly increasing the company's coal production capacity within the next year. The company is currently operating a coal mine via two subsidiaries in Indonesia – PT Lanna Harita Indonesia and PT Citra Harita Mineral.

The current combined production capacity of the 2 companies totals about 1Mt a year. The figure is expected to increase to 4 - 5Mt annually once it is fully operational. The capacity from the new coal mine will partially replace the local production in Lanphun province which closed recently.

Anglo launches production at coal mine (South Africa)

Mining giant Anglo American has launched production at its Isibonelo coal mine in South Africa. The \$65M Isibonelo coal mine, which supplies its material to synthetic fuels producer Sasol, is due to produce 5Mt of thermal coal per year when the mine reaches full output next year. Anglo Coal produced 89.6Mt of coal last year, of which 54.5Mt came from South Africa.

Koreas in talks on coal project (South Korea)

Seoul and Pyongyang will have working-level talks about jointly mining North Korea's coal reserves. South Korea's state-run Korean Coal Corporation will lead a five-member team in the discussions, while Pyongyang's Ministry of Power and Coal Industries will represent North Korea.

The North's coal reserves are estimated at 14.7 billion tons; coal accounts for 70% of its energy consumption. Its coal production peaked at 37Mt in 1985, but by 2002, it had dropped by 42% due to equipment problems. The South once mined 25Mt of coal annually, but has since reduced production to 3.2Mt. In 1989, Seoul decided it was cheaper to import coal than to mine it. South Korea annually imports about 80Mt of coal.

Phasing out of all nuclear power for coal (Taiwan)

Taiwan plans to double the amount of electricity it can generate from coal as it phases out nuclear power because of public opposition that may prevent a US\$7 billion project involving two reactors from ever operating.

Taiwan will eventually become nuclear-free. Taiwan got 21% of its power supply from nuclear reactors last year. At the same time as the US and some European countries indicate they may build more reactors, Taiwan is ruling out nuclear power as a solution to increasing emissions of harmful gases. The decision frees Taiwan Power Co to embark on a US\$13 billion expansion of its coal fired plants and may boost the nation's coal imports from miners such as Anglo American Plc and BHP Billiton Plc.

Taiwan imported all of the 57.1Mt of coal it used last year, with 75% of the fuel burnt to generate electricity. Public concern that nuclear power stations are unsafe is heightened by the 200 earthquakes that strike the nation in an average year. Taiwan sits along faults between the Philippine Sea and Eurasian Continental tectonic plates where quakes occur as the plates push together. In 1999, a magnitude 7.6 earthquake centred 150km southwest of Taipei killed 2,500 people.

The government may not allow state-run Taiwan Power, known as Taipower, to start operating the country's fourth nuclear power plant should concerns about the project's safety persist. The policy meeting, Taiwan's first on energy in seven years, involved about 300 government officials, academics, environmentalists and executives. Those proposals allow Taipower to start a programme to build a coal fired power station in western Taiwan and renovate two others. The utility also intends to build a plant in northern Taiwan by 2015. Taiwan's first three nuclear power plants will probably all be decommissioned by 2025.

Ultra-clean coal to power a greener future (UK)

Engineers in Nottingham are developing ultra-clean coal that could make power generation 50% more efficient and reduce CO₂ emissions by one third. A team at The University of Nottingham is one of only two in the world working on ground-breaking techniques to purify one of the world's main energy sources. They have been awarded £120,000 to help them develop the ultra-clean fuel for the power stations of the future.

Ultra-clean coal could also help reduce the world's dependence on oil. There are greater untapped reserves of coal, and they are generally located away from the politically sensitive Middle East. For example, China and the USA both have large reserves of coal — but not much oil.

Massey Energy acquires Great Western Coal (USA)

Massey Energy announced that it has acquired the primary assets of Kentucky-based Great Western Coal for approximately \$US2.1M. The deal also includes Massey's assumption of some \$US2.7M in related property reclamation liabilities and \$US1.85M in mining equipment.

Virginia-based Massey, who acquired Great Western through the company's bankruptcy proceedings, now possesses an additional 14Mt of high quality, low sulphur industrial and utility coal reserves and related capital assets, including an active surface mine and rail loading facility. Production levels of the surface operation are estimated to be about 200,000-300,000Mt per annum. Massey currently owns mining operations in West Virginia, Kentucky and Virginia and is the fourth largest US coal company in terms of revenue from produced coal.

Vietnam becomes Guangdong's No. 1 coal import source (Vietnam)

Vietnam has replaced Australia as the No. 1 coal import source for Guangdong Province in south China, one of China's economic powerhouses. Local customs statistics show that the imported coal of Guangdong from Vietnam hit 2.18Mt during January-May period, up 65.7% from the same period last year.

During the same period, Guangdong also imported 0.52Mt of coal from Indonesia, more than double the comparable figure last year. According to the same sources, Guangdong altogether imported 3.61Mt of coal in the first months of the year, worth US\$170M. The coal import volume rose by 64.7% according to statistics for the same period last year, but their value more than doubled that of last year.

The drastic rise in coal imports in Guangdong is caused by a surging demand for coal in the wake of acute power shortage in this southern Chinese province. In the meantime, the bottleneck in transporting coal from coal producing areas in northern China to the southern areas of the country, and the state's tariff cuts for imports of soft and coking coal have also played their parts in driving up the imported coal in Guangdong, according to the customs sources.

TECHNOLOGY (items from Coal21 news)

Incentives needed for advanced coal technology

Substantial incentives for advanced coal technologies have been recommended in a recently published US national energy report. "Energy Stalemate: A Bipartisan Strategy to Meet America's Energy Challenges", published by the National Commission on Energy Policy, contains detailed policy recommendations for addressing oil security, climate change, natural gas supply, the future of nuclear energy and other long term challenges. With regard to 'Advanced Coal Technologies', the report recommends providing US\$4 billion over 10 years in early deployment incentives for integrated gasification combined cycle coal technology plus US\$3 billion over 10 years in public incentives to demonstrate commercial scale carbon capture and storage at a variety of sites. The report said coal gasification holds promise for economically capturing CO₂ emissions. "Coal's abundance in the United States, and in major developing countries like China and India, makes finding clean ways to use it among our highest priorities" the report said.

American Electric Power moves forward with IGCC project

American Electric Power has begun evaluating the feasibility of transmission interconnection for three potential sites being considered by AEP for a commercial scale IGCC clean coal power plant, the first of its size in the US. AEP stated "Our success with this project will set a new industry standard for using coal - America's most abundant resource - while providing much-needed low cost generation that will be as environmentally responsible as possible." The three potential sites are in West Virginia, Ohio and Kentucky. AEP announced last year plans to build at least one commercial scale, base-load IGCC plant by 2010.

IGCC technology converts coal into a gas and moves it through pollutant removal equipment before the gas is burned in gas turbines that drive electric generators. The heat produced by the gas turbines is recovered in boilers that produce steam to drive a steam turbine also coupled to an electric generator. The integrated process results in fewer emissions of sulphur and nitrogen oxides, particulates and mercury, in addition to lower carbon dioxide emissions.

APEC told of suitable CO₂ storage sites

The Australian Cooperative Research Center for Greenhouse Gas Technologies (CO₂CRC) told a recent research symposium it was optimistic that further detailed studies would confirm that suitable CO₂ storage sites existed in the vicinity of the major Chinese population centres of Beijing, Shanghai and Zengzhou. The status report on the CO₂ storage potential in the region was presented at the Asia-Pacific Economic Cooperation forum in Korea as a result of the work being undertaken at Geoscience Australia for CO₂CRC. Only published information was used for the study and it concentrated on four main stationary emission nodes centred on the population centres of Beijing, Shanghai, Guangzhou and Zengzhou. "These sites collectively emit around 1070Mt a year of CO₂; about 40% of China's total stationary emissions and almost four times Australia's total stationary emissions. In each of these major areas, the sedimentary basins were analysed at a very regional level and in most cases it appears that storage sites suitable to store emissions from these population centres are likely to be found with further detailed work."

CO₂CRC also reported that Malaysia and Indonesia had the potential to significantly reduce their greenhouse gas emissions through CO₂ storage. "It looks like the depleted hydrocarbon fields in both countries could provide significant storage capacity in relation to their generally low CO₂ emissions."

CO₂ Capture Project heads into second phase

The CO₂ Capture Project (CCP) has announced the commencement of the second phase of its project to develop technologies that could mitigate greenhouse gas emissions. CCP is a joint project funded by the European Commission, the US Department of Energy and Klimatek (Norway). Participating companies are: BP, Chevron Texaco, Conoco Phillips, Eni Hydro, Petrobras, Royal Dutch/Shell Group and Suncor. The first phase of CCP (CCP1) cost US\$50 million and developed a range of technologies to reduce the cost of CO₂ capture and provide assurance that CO₂ can be securely stored geologically. The second phase of the project

(CCP2) has now commenced, building on the achievements of Phase 1 by developing a focused suite of capture technologies to be ready for pilot testing by the end of 2007.

UK tax incentives for storage

The UK Chancellor Gordon Brown says he is considering tax incentives for firms to capture and store carbon dioxide emissions. He told a meeting of energy and environment ministers from 20 countries that accelerated climate change was a threat to the global economy and tackling it should be central to economic policy. Mr. Brown said new technologies such as the capture of carbon dioxide emissions from power stations and its storage in used oil and gas wells were likely to be crucial to tackling climate change, particularly for economies such as China. The Treasury would be examining economic incentives to encourage carbon capture, which he said had the potential to bring about a "step change" in reducing greenhouse gas emissions. Britain has pledged to reduce them by 50% by 2050.

Storage in Victoria investigated

A team of researchers from the CO2CRC is investigating the potential for storing in the Gippsland Basin CO₂ generated by brown coal industries in the Latrobe Valley. The region in Eastern Victoria is considered by many to be an excellent location for carbon capture and storage because of the close proximity of large CO₂ sources to storage sites in the offshore Gippsland Basin. As well as assessing the technical and economic potential for the offshore storage of CO₂, the project will include an issues analysis that will provide a framework for subsequent government and stakeholder engagement.

CO2CRC researchers say that it is likely that the best injection sites will be located offshore. Deep geological reservoirs off the East coast of Victoria are likely to have good geological structures, reservoirs and seals for safely trapping and storing CO₂. They are the same subsurface structures that have trapped oil and gas for millions of years. The Latrobe Valley Carbon Storage Assessment is expected to be completed and made public later this year. Information sessions telling the local community about the research findings will be organised towards the end of the year. The project benefits from access to scientific information from the Victorian Government Department of Primary Industries and oil and gas producers.

ABSTRACTS OF COAL REPORTS (www.sciencedirect.com)

1. Energyplexes for the 21st century: Coal gasification for co-producing hydrogen, electricity and liquid fuels by Kei Yamashita and Leonardo Barreto

This paper illustrates the role that integrated energy systems, also known as 'energyplexes', could play in supplying energy demands in the long term. These systems could enable a multi-fuel, multi-product strategy with both economic and environmental benefits. They could increase the adaptability and robustness of energy services companies in the marketplace, providing them with flexibility in meeting demands in different market segments while achieving lower production costs and, reducing the risks of reliance on a single feedstock.

2. The World Coal Quality Inventory: A status report by Susan J. Tewalt, Jason C. Willett and Robert B. Finkelman

National and international policy makers and industry require accurate information on coal including coal quality data, to make informed decisions regarding international import needs and export opportunities, foreign policy, technology transfer policies, foreign investment prospects, environmental and health assessments, and byproduct use and disposal issues. Unfortunately, the information needed is generally proprietary and does not exist in the public domain. The U.S. Geological Survey (USGS), in conjunction with partners in about 60 countries, is developing a digital compilation of worldwide coal quality.

3. New IEA-CCC Report: Land Uses of Coal Fly Ash- benefits and barriers by Irene Smith.

This report focuses on three major sectors of fly ash utilisation: soil stabilisation, mine backfill and agriculture. Requirements are generally less rigorous than for use of fly ash in the cement and concrete industries. The benefits of using fly ash are examined for each sector. Barriers to utilisation of coal fly ash on land occur in marketing, transport, and through the potential for leachates containing trace elements from fly ash.

EVENTS

22nd annual international Pittsburgh coal conference, Pittsburgh, PA, USA, 12-15 Sep 2005, Crystal M. Jones, PCC Secretary, University of Pittsburgh, School of Engineering, 1249 Benedum Hall, Pittsburgh, PA 15261, USA, Tel: +1 412 624 7440, Fax: +1 412 624 1480, Email: pcc@engr.pitt.edu, Internet: www.engr.pitt.edu/pcc

Power-Gen Asia 2005 conference, Suntec City, Singapore, 13-15 Sep 2005, Vanesa Martinez, PennWell Publishing UK Ltd., Warlies Park House, Horseshoe Hill, Upshire, Essex EN9 3SR, UK, Tel: +44 1992 656 600, Fax: +44 1992 656 704, Email: attendingpge@pennwell.com, Internet: www.powergeneurope.com

Platts 28th annual coal marketing days conference: issues in coal supply/demand, regulation, transportation, and finance, Pittsburgh, PA, USA, 26-27 Sep 2005, James Gillies, Platts, Boston, 4 Hartwell Ave., 3rd Floor, Lexington, MA 02421, USA, Tel: +1 781 860 6110, Fax: +1 781 860 6101, Email: James_gillies@platts.com, Internet: www.platts.com/Events/Coal%20Marketing%20Days/index.html?S=n

2005 ICCS&T - international conference on coal science and technology, Okinawa, Japan, 9-13 Oct 2005, Ms Yoshimi Kunugi-Nishina, AIST Tsukuba Central 1, Tsukuba, Ibaraki 305-8561, Japan, Tel: +81 29 861 8423, Fax: +81 29 861 8417, Email: y-nishina@aist.go.jp, Internet: <http://unit.aist.go.jp/energy/iccst/>

15 international coal preparation congress & exhibition: designing for the environment, Beijing, China, 17-20 Oct 2006, Ms. Sun Jiaohua, Department of International Cooperation, China National Coal Association, 21 Hepingli Beijie, Beijing 100713, China, Email: sjiaohua@chinasafety.gov.cn

Cooperative Research Centre for Coal in Sustainable Development Annual Conference, Brisbane, Australia, 25 Oct 2005, www.ccsd.biz

Greenhouse 2005 -on Climate Change, Melbourne, Australia, 13-17 Nov 2005, www.greenhouse2005.com

2005 Clean Coal and Power Conference, Renaissance Mayflower Hotel, Washington DC, USA, 21-22 November 2005. Email: faith.cline@hq.doe.gov; www.fossil.energy.gov/news/events/cleancoal

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